

Wadsworth Center's Bioterrorism Experience

Environmental Anthrax Threats In New York



History of Human Anthrax in New York State

109 cases, 5 deaths, from 1943 to 1960

107 cutaneous anthrax

1 Bacteremia

1 Meningitis

**Most cases involved employees of carpet
mills or leather industries**

Prior to 2001, last reported case in 1961

Emerging and Reemerging Infectious Agents Found in New York State Since 1990

Anthrax

Babesia

Brucella

Calicivirus

Coccidioides

Cryptosporidium

Cyclospora

E. coli O157:H7

Ehrlichia

Giardia

Group A Strep-Necrotizing

Fascitis

Hantavirus

Listeria

Malaria

Q-fever

Raccoon rabies

Rocky Mountain

Spotted Fever

Silver Haired Bat

Rabies Variant

Vancomycin-Intermediate

Resistant Staphylococcus

Aureus

West Nile Virus

Wadsworth Center

Anthrax Incident Log: 1999-2000

| No. | DATE | TOWN/CITY | COUNTY/STATE | THREAT |
|-----|------------|---------------|---------------|------------------------|
| 1 | 2/19/1999 | Burlington | Vermont | Letter |
| 2 | 1/19/1999 | St. Johnsbury | Vermont | Letter |
| 3 | 2/22/1999 | Hudson | Columbia | Letter in garbage bag? |
| 4 | 5/17/1999 | Syracuse | Onondaga | Letter/Powder |
| 5 | 5/17/1999 | Syracuse | Onondaga | Letter/Powder |
| 6 | 5/19/1999 | Brooklyn | New York City | Canister |
| 7 | 6/15/1999 | Canister | Nassau | Letter |
| 8 | 6/15/1999 | Hempstead | Nassau | Letter |
| 9 | 8/19/1999 | Pompey | Onondaga | Letter/Blades |
| 10 | 12/07/1999 | Saugerties | Ulster | Envelope |
| 11 | 1/03/2000 | Bronx | New York City | Letter |
| 12 | 1/04/2000 | New York City | New York City | Letter |
| 13 | 1/05/2000 | Williston | Vermont | Letter |
| 14 | 1/06/2000 | Bennington | Vermont | Letter |
| 15 | 11/02/2000 | Orange County | New York | Letter/Powder |
| 16 | 11/24/2000 | New York City | New York | Letter/Powder |
| 17 | 11/28/2000 | New York City | New York | Letter/Brown Powder |

TRIPLE BAGGED

1715 HRS

2/18/99

T.C. Fuller

SA T.C. FULLER, FBI

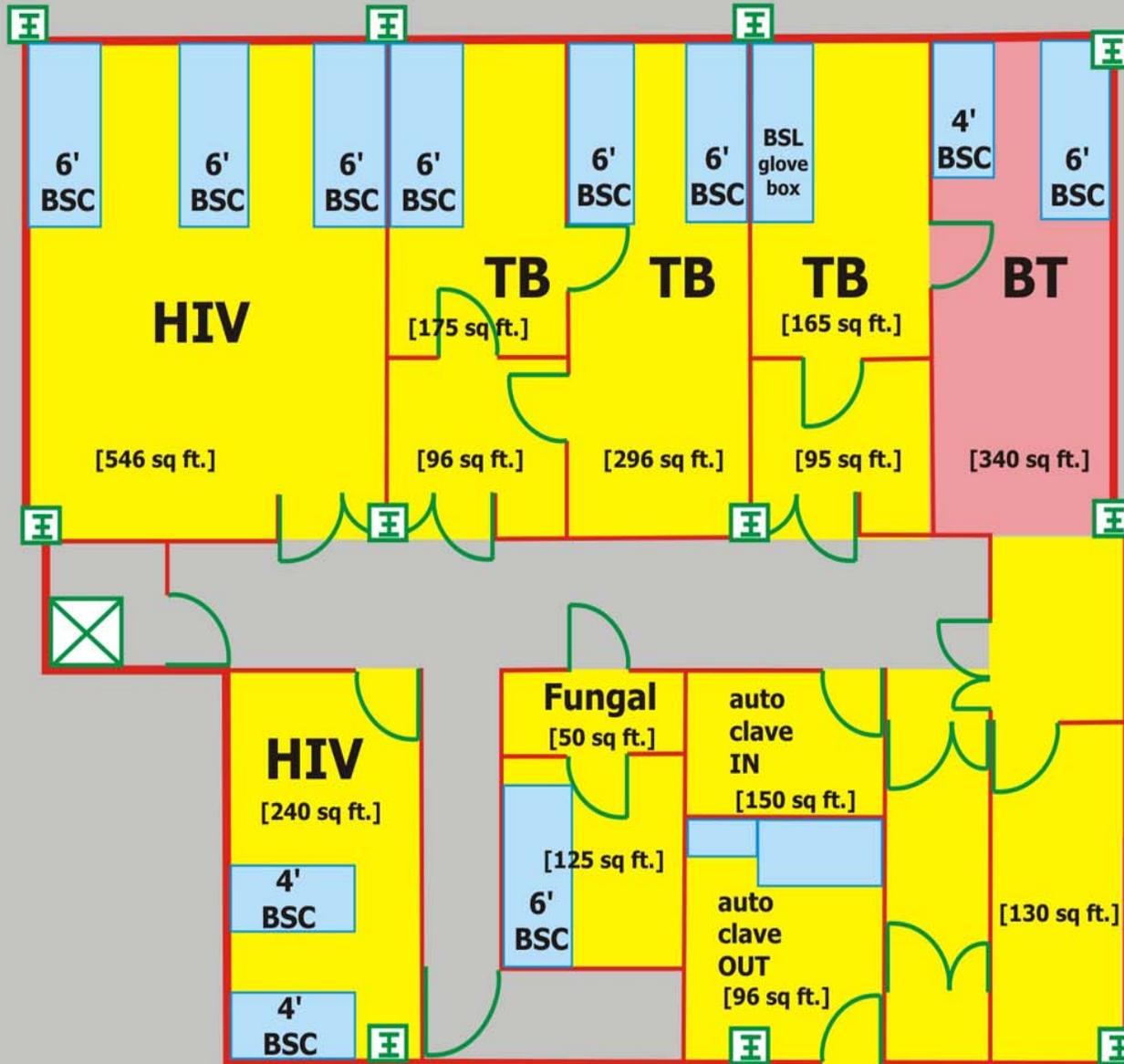
BORA, ALBANY, DIED,



DANGER

WARNING: BACTERIOLOGIC
HAZARD - class 3
code 1950677
ANTHRAX BACILLUS

BSL-3 Laboratory: pre June 2001



BSL-3 Laboratory: post June 2001

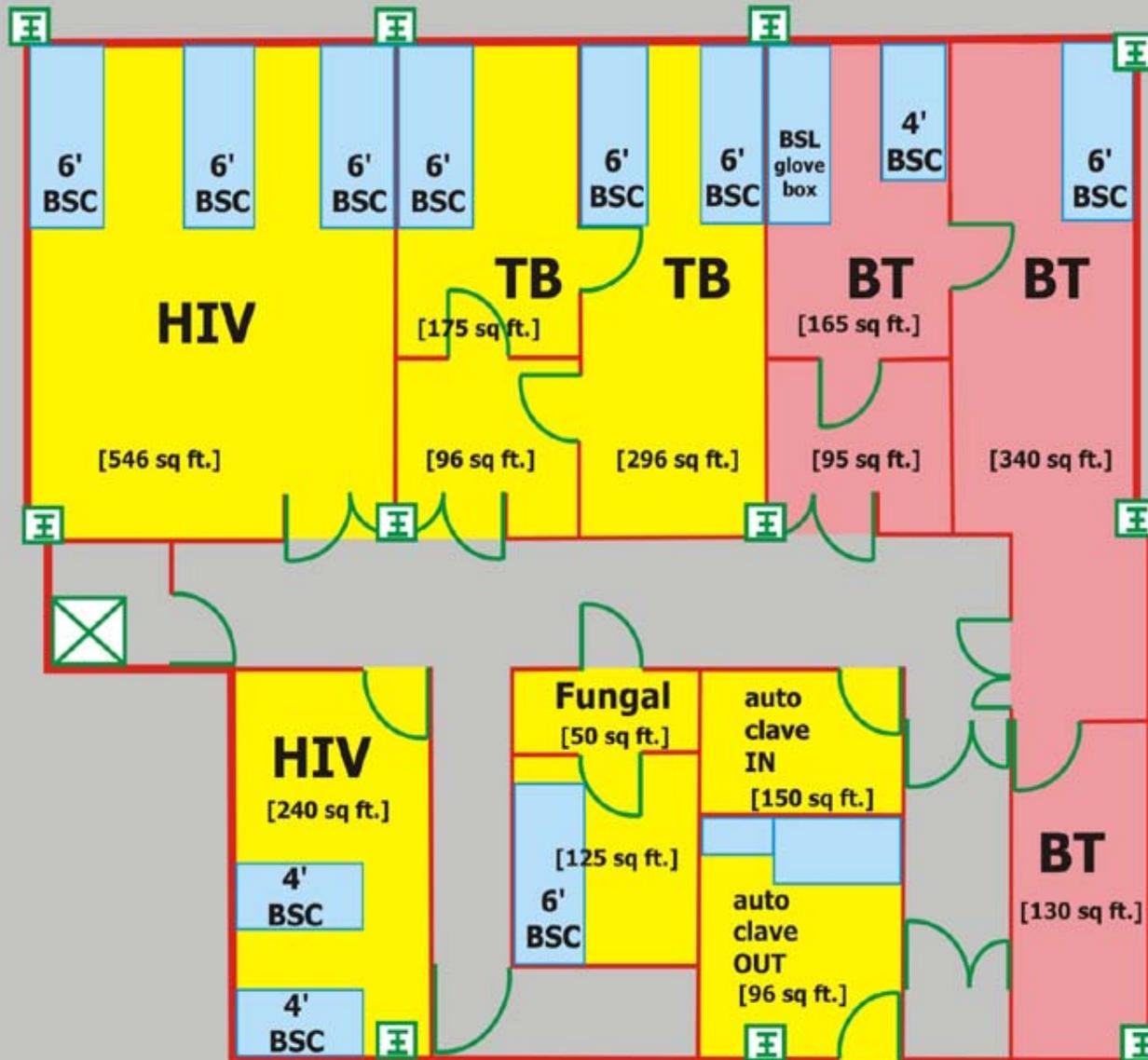




Photo courtesy: The Albany Times Union

NYC Anthrax Case Summary

| AGE | SITE | ONSET | LOCATION | SOURCE |
|----------------|--------------|--------------|-----------------|--------------------|
| 32 F | Cutan | 9/22 | NY Post | Letter 9/18 |
| 38 F | Cutan | 9/25 | NBC News | Letter 9/18 |
| 23 F | Cutan | 9/28 | NBC News | Letter 9/18 |
| <1 M | Cutan | 9/29 | ABC News | +env swab |
| 27 F | Cutan | 10/01 | CBS News | +env swab |
| 34 M | Cutan | 10/19 | NY Post | Letter 9/18 |
| 38 M | Cutan | 10/23 | NY Post | Letter 9/18 |
| 61 F | Inhal | 10/25 | MEETH | ?? |

Anthrax Testing Since October 2001

Environmental

samples tested: >900

Number positive: 24



**Some specimens
submitted for
testing were
valid concerns...**

**But many others
were the result
of hoaxes
or hysteria**

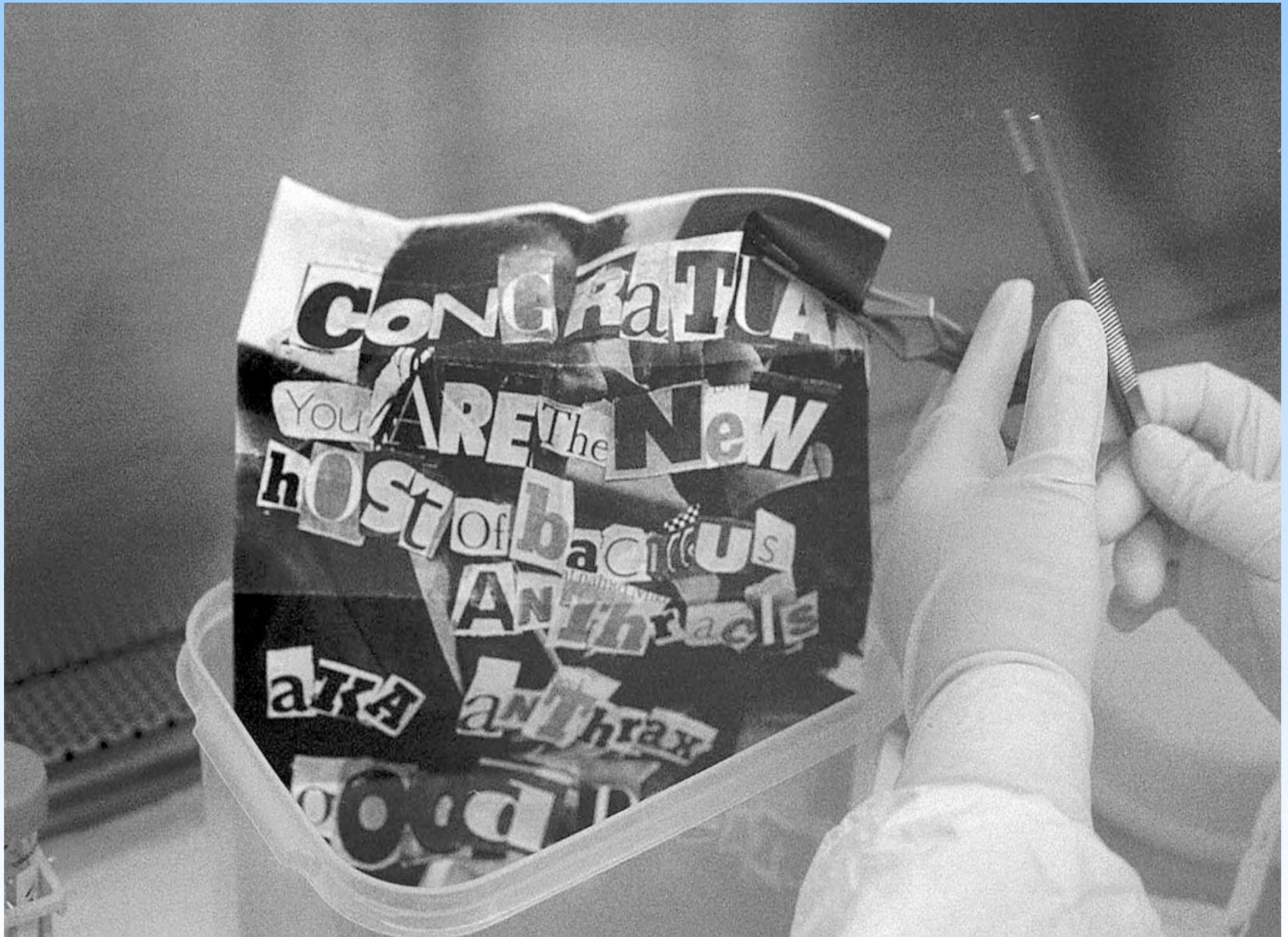


J Hill
1500
Killing ton New York
1150

Tracy Steiner De Zerind
I think

714 Childs
Greenville NY 11083

W. B. Grent Letters



CONGRATULATIONS

You ARE The New

host of bacillus

ANTHRAXIS

ATA anthrax

good





AMERICAN EAGLE

F
NO 7377
AMERICAN EAGLE OUTFITTERY
ESTD. 1951
MANUFACTURER OF QUALITY GOODS
GENUINE BRAND - 100% COTTON
NO WAIST FLAP
SIZE 14

AMERICAN EAGLE OUTFITTERY
ESTD. 1951
MANUFACTURER OF QUALITY GOODS
SUPER LOW RISE
NO WAIST FLAP
SANDBLAST



ADVANCED DELUXE
Automatic Self-Cleaning Litter Box

LITTER MAID

AS SEEN ON
TV

WINDMERE™

- Completely Automatic
- No More Scooping
- Eliminates Most Odors
- Self-Cleaning

NEW & IMPROVED
Quieter Motor

INCLUDES

- NEW Quiet motor
- NEW Deep litter pan
- NEW Detachable pan
- NEW Removable rake
- 12 waste containers
- ✓ Safety bar
- ✓ Cat paw cleaning

Works ONLY
with Premium
Clumping Litter

ONE YEAR



**CRITERIA FOR WADSWORTH TESTING
FOR ANTHRAX OF ENVIRONMENTAL SPECIMENS**

OCTOBER 16, 2001

A) Situations in which there is not human illness:

1) Is there a plausible threat?*

YES _____ NO _____

**A plausible threat includes an explicit verbal or written threat, or similar suspicious circumstances, that the FBI considers serious enough to conduct a criminal investigation.*

2) Is there powder/substance available for testing?

YES _____ NO _____

3) Was there a person or persons in direct contact with powder/substance (e.g., "direct" contact means skin contact with the powder, exposure to inhaled powder, etc.)?

YES _____ NO _____

**WADSWORTH WILL TEST SPECIMENS MEETING ALL THREE OF THE ABOVE
CRITERIA, AS WELL AS THOSE THAT MEET ONE AND TWO AND
ARE DETERMINED HIGH RISK BY THE FBI/STATE POLICE.**

B) Situations in which there is human illness:

1) Is there a person who has cutaneous or systemic illness consistent with anthrax and who had contact with a suspicious material?

YES _____ NO _____

2) Is the suspicious material available for testing?

YES _____ NO _____

**IF "YES" TO BOTH QUESTIONS, THEN SPECIMEN
WILL BE TESTED AT WADSWORTH LAB.**

**WADSWORTH LAB WILL NOT ACCEPT ANY SPECIMEN UNTIL THE FBI (OR STATE
POLICE LAB) HAS CALLED THE NEW YORK STATE DEPARTMENT OF
HEALTH TO AUTHORIZE TESTING. SPECIMENS WILL BE ACCEPTED
7 AM TO 6 PM FOR LABORATORY ACCESSIONING, WEEKDAYS.**

ON WEEKENDS, SPECIMENS MAY BE ACCEPTED ONLY BY SPECIAL ARRANGEMENT.

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER
Anthrax Environmental Specimen Submission Form

Wadsworth Center will NOT accept any specimen until the FBI or State Police Lab has called the New York State Department of Health at (518) 474-2821 to authorize testing. Specimens will be accepted 8 am to 6 pm, weekdays. On weekends, specimens may be accepted only by special arrangement.

NOTE: This form MUST be completed in order for specimens to be tested by the New York State Department of Health (NYSDOH) Wadsworth Center. DO NOT complete this form in or near the contaminated area. This form must travel with the item(s) being submitted for testing. DO NOT enclose this form inside the package with the items being submitted.

You MUST notify the County Health Department of all laboratory submissions.

Agency Authorizing Submission: FBI State Police Lab

Name of Person Authorizing Submission: _____

Phone #: _____ Law Enforcement Agency's Case Number for this Incident: _____

County of Incident: _____
(Must Complete)

Incident Location: _____
(Contact Name at Site) (Phone Number)

(Name of Facility/Institution/Building) (Address)

(Department/Floor/Room Number) (City/State/Zip Code)

Description of Incident: _____

Description of Item(s): (Attach a separate list if more than 5 items)

Item 1: ID# _____ Description: _____

Item 2: ID# _____ Description: _____

Item 3: ID# _____ Description: _____

Item 4: ID# _____ Description: _____

Item 5: ID# _____ Description: _____

Date Item(s) Collected: ____/____/____

Time Item(s) Collected: _____

(1) Responsible Party at Site to receive incident results: (2) Other Responsible Party to receive incident results:

(Name of Authorized Person)

(Name of Authorized Person)

(Name of Facility/Institution/Organization)

(Name of Facility/Institution/Organization)

(Department/Floor/Room Number)

(Department/Floor/Room Number)

(City/State/Zip Code)

(City/State/Zip Code)

(Phone Number)

(Phone Number)

(Fax Number)

(Fax Number)

(e-mail address)

(e-mail address)

External Chain of Custody

**Wadsworth Center
New York State Department of Health
120 New Scotland Avenue
Albany, NY 12208
(518) 474-2821
(518) 473-4959**

Origin of incident: _____

County of Incident: _____

Received from: _____ **Signature:** _____

Affiliation/Address: _____

External Unique Incident Identifier _____

Received by: _____ **Signature:** _____

Time Received: _____ **Date Received:** _____

Report Results to:

Name: _____

Address: _____

Phone: _____ **Fax:** _____

Wadsworth Center Internal Unique Incident Identifier _____

ITEM # _____

Returned by: _____ **Time Returned:** _____

Signature: _____

Returned to: _____ **Date Returned:** _____

Signature: _____

Affiliation/Address: _____

BT Identification Number (from Chain of Custody form): BT01-_____ Item number: _____

Date specimen opened (mm/dd/yy): __/__/____ Received: __:__(AM/PM) __/__/____

Person opening specimen: _____ Person assisting: _____

Place of incident: _____

Specimen Description: _____

Does the item contain POWDER? (circle one) Yes No Uncertain

If YES, describe (color, texture, approx. quantity) _____

Type of item (choose and circle ONE category which best describes the item as it was received):

A) Mailed item (If yes, please answer A1-A5 if data are available):

A1) Type: a) Letter b) Package c) Other _____

A2) Addressee _____

A3) Sender _____

A4) Postmark location _____ A5) Postmark date __/__/____

B) Culture swab (describe if appropriate _____)

C) Gauze pad (describe if appropriate _____)

D) Clothing (describe item: _____)

E) Other (describe: _____)

Additional description: _____

Camera or SmartCard on which photos are stored: _____ Exposure #s: _____

Swab(s) taken from: a) _____

b) _____

c) _____

Laboratory Response Network

- LEVEL A:** Rule out critical biological agents Refer positives to higher level laboratory
- LEVEL B:** BSL-3 facility with rapid, presumptive identification; Refer positives to higher level laboratory
- LEVEL C:** BSL-3 facility with molecular testing capability; Serve as surge capacity; Refer positives to higher level laboratory
- LEVEL D:** BSL-4 laboratory capability; High-level characterization; Evaluate unknown agents; Secure storage of organisms

Potential Laboratory Response Network Participants

Clinical Laboratory Reference System (935)

Clinical Microbiology 293

Virology 76

Environmental Laboratory Approval Program (734)

Environmental Microbiology 282

BT Testing Capabilities

BT AGENT

METHOD

| | |
|---|---|
| <i>Bacillus anthracis</i> | Culture, Phage-lysis, FA, Antigen capture, PCR |
| <i>Clostridium botulinum</i> toxin | Animal toxicity/neutralization, (PCR) |
| <i>Brucella spp.</i> | Culture, (PCR) |
| <i>Yersinia pestis</i> | Culture, Phage-lysis, FA, Antigen capture, (PCR) |
| <i>Francisella tularensis</i> | Culture, FA, Antigen capture, (PCR) |
| Smallpox (<i>Variola</i>) | (EM), (PCR) |



*The Role of the
Clinical Laboratory
In Response to
Bioterrorism*

Videoconference

**February 6, 2002
9:00 a.m.-12:00 p.m.**

Sponsored by
**Wadsworth Center—New York State
Department of Health**

**Healthcare Association
of New York State**

**The Northeast Region
National Laboratory
Training Network**

BT Laboratory Preparedness Requirements

**Dedicated modern Biosafety Level 3
laboratory for bioterrorism testing, with
surge capacity**

**Specially trained team of scientists to
coordinate bioterrorism testing**

**Validated protocols in place for testing critical
Category A biological agents assigned to
Biosafety Level 3**

Concluding Thoughts

Response capabilities and capacities must be developed before they are needed

Current definitions of laboratory functions are becoming outmoded

“Clinical” laboratories are testing environmental samples

“Environmental” laboratories are undertaking biomonitoring

Future incidents could involve multiple/mixed agents

(In the early 1960's) "American germ-warfare scientists had developed a special cocktail of two germs and one biological toxin designed to work sequentially so that victims would come down with uncommonly long periods of sickness and debilitation...The toxin of the cocktail was staphylococcal enterotoxin B...The virus in the mix caused Venezuelan equine encephalitis...The final element was the bug that caused Q fever."

**From *Germs Biological Weapons and America's Secret War*
By Judith Miller, Stephen Engelberg, William Broad**